ACCESS TO NUTRITION INITIATIVE

Sector Alignment on the Use of Nutrient Profile Models

September 2024

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Abbreviations

ATNI	Access to Nutrition Initiative
CSO	Civil Society Organization
EBIT	Earnings Before Interest and Taxes
ESG	Environmental, Social, and Governance
HSR	Health Star Rating
NGO	Non-governmental Organization
NPM	Nutrient Profile Model
UK NPM	United Kingdom Nutrient Profile Model
WHO	World Health Organization

Contents

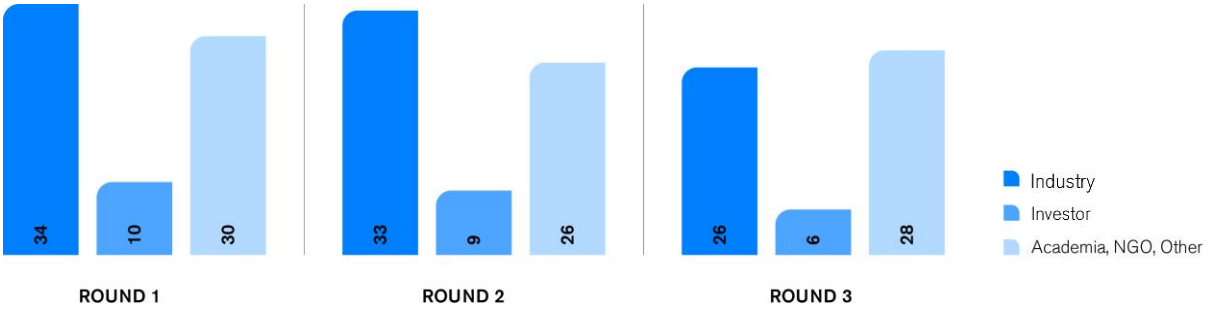
Executive Summary

One in five deaths globally is associated with poor diet. Researchers, nutrition and health experts, investors, and consumers increasingly recognize that many of the foods available in retail environments contribute to global mortality and morbidity rates.

It is critical for the investor community to prioritize healthy diets as an integral part of sustainable investing. However, to date, there is no single agreed-upon way to define and measure the healthiness of food portfolios, which hampers progress in improving the healthiness of food environments. Without a globally accepted definition of what makes a particular food or beverage healthy, assessing and comparing food companies' commitments toward healthier portfolios is difficult.

Given the lack of alignment in this area, the Access to Nutrition Initiative (ATNI) conducted a research series in 2023 and 2024 to bring increased understanding and harmonization to the sector on defining and measuring healthy foods. A three-round Delphi process, inclusive of three surveys and two roundtable events, has been completed. During the three Delphi Rounds, participants evaluated the need and feasibility of aligning on NPMs used for reporting, the essential features of a robust Nutrient Profile Model (NPM), and reporting standards. This process facilitated cross-sectoral stakeholder alignment on identifying NPMs to report on, assess, and compare the healthiness of food industry portfolios.

A total of 86 individuals from 14 countries participated in this research, including representatives from the food industry, investors, academic experts, non-governmental organizations (NGOs), and others.



Three NPMs were found to be most appropriate for future investor reporting (using components of the proposed Reporting Guidelines): Health Star Rating (HSR), Nutri-Score, and the UK NPM.

1: Health Star Rating (HSR)
2: Nutri-Score
3: UK Nutrient Profile Model (UK NPM)

In addition to the Delphi study, a comparative analysis was performed to evaluate and compare the performance of the selected NPMs across 17 different product categories and four types of company portfolios. The comparative analysis revealed complete agreement across NPMs in categorizing 'Confectionery' and 'Sweet Biscuits, Snack Bars and Fruit Snacks' as less healthy[a] as these categories did not meet the criteria for healthiness of any NPM. Disparities were found in the classification of 'Ice

[a] 'less healthy' was defined as (HSR <3.5, Nutri-Score D-E and UK NPM score >4 for foods and >1 for drinks) in the comparative analysis

Cream,' 'Juice,' and 'Sports Drinks,' indicating low agreement among the NPMs. The mixed, dairy, and beverages portfolios showed greater variability compared to the consistent classification in the "indulgent" portfolio. The findings from the comparative analysis highlight the need to consider multiple NPMs for a comprehensive assessment of product healthiness, as relying on a single model may result in varying conclusions.

Multiple investor organizations, including those in ATNI's Investors in Nutrition and Health (AINH) have expressed their commitment to use the results and the proposed Reporting Guidelines summarized in this report in their engagement with companies. Reporting using the selected NPMs and standardized guidelines will allow investors to better interpret, understand, and compare the healthiness of companies' product portfolios. Public reporting is expected to commence once the concept has been further explored and adopted by industry members, including food and beverage manufacturers, retailers, and food service providers.

Juan Salazar, Senior Engagement Specialist at Pictet Asset Management explained the usefulness of achieving alignment saying,

"We would all benefit from getting to that level where we can easily compare between two companies that currently use different models."

Background

Nutrition is becoming increasingly important for the investor community and pressure is mounting for food and beverage companies to improve their impact on public health. Investing in public health will not only improve the health of society but also advance equity and foster economic and climate resilience. Hence, healthy diets are becoming an important part of sustainable investing.

To improve investment strategies in nutrition, there is a need to assess food industry action and hold companies accountable for commitments and contributions to healthy diets and addressing malnutrition in all its forms. However, currently there is no globally aligned and accepted definition of "healthy", which makes assessing and comparing food companies' commitments toward healthier portfolios difficult. Given the lack of alignment in this area, the Access to Nutrition Initiative (ATNI) aims to bring increased understanding and harmonization to the sector on defining and measuring healthy foods.

A Nutrient Profile Model (NPM) – a tool used to classify or score food products according to their nutritional composition and impact on health[1] – can serve as a tool to evaluate the nutritional quality of foods and highlight what food choices contribute to a healthy diet. There are currently more than one hundred internationally recognized NPMs. A 2018 systematic review identified 387 potential models, including 78 models developed or endorsed by governmental or intergovernmental organizations that are used in government nutrition-related policies and regulations[2]. In an updated review published in 2023, a further 93 new NPMs were identified, of which 26 met the study inclusion criteria[3]. These existing models differ in terms of product categorization; defined nutrient level thresholds; scoring system; and purpose of use, and no model is a globally recognized 'gold standard.' However, those developed or endorsed by authoritative public health and regulatory bodies are considered the best reference.

The discrepancy among models creates confusion for regulators, manufacturers, investors, and consumers, and defeats the purpose of these models, which is to facilitate healthier food choices, as explained by Francesco Branca, Director of the Department of Nutrition and Food Safety at the World Health Organization (WHO) in his recent ATNI guest blog[4].

To address this challenge, ATNI aims to bring increased understanding and harmonization to the sector on defining and measuring healthy foods using NPMs. At the heart of this exercise is the belief that companies that hold themselves accountable and contribute to improved diets will be more viable and valuable for society in the long term. A 2024 study into the materiality of nutrition by Planet Tracker and ATNI using portfolio healthiness scores based on the Health Star Rating NPM showed on average higher profitability (measured in earnings before interest and taxes (EBIT) margins) for companies with broader, healthier food portfolios (15.2%) versus their peers (13.4%). But for companies with narrow portfolios (like those that predominantly sell beverages) the opposite seems true, with average EBIT margins of 16.7% for companies with less healthy product portfolios versus 10.4% for those with healthier product portfolios[5].

This Delphi process was designed to facilitate stakeholder alignment on a standard to assess and compare the healthiness of companies' food product portfolios using NPMs and on the reporting of the results.

Methodology

Delphi approach

The Delphi approach – a well-established research method that offers a structured, iterative approach to gather consensus among experts on complex topics – was adopted for this NPM alignment initiative[6].

A Delphi approach usually includes three iterations, which served as the theoretical basis for the three Delphi Rounds conducted in this NPM alignment initiative[7]. In our research, we invited participants with diverse backgrounds, including those from the food and beverage industry, investor community, NGOs, academia, and others, to voluntarily contribute based on their interests and perspectives on food and nutrition. Participants were recruited through ATNI's network of companies, academic experts, investors, and industry groups[b]. Additional participants were included if they expressed interest based on the ATNI project-related public announcements, word-of-mouth through industry groups, or social media communications.

We used a series of three Delphi rounds and two roundtable discussions to facilitate knowledge sharing and participatory dialogues with the aim of understanding the challenges and barriers presented by participants on NPM alignment-related topics. Our iterative research process used learnings from each of the rounds and roundtables to inform what questions were asked in subsequent rounds.

Delphi Rounds

Each Delphi Round included one survey, in which Likert scales were used to identify the level of agreement amongst participants on a set of NPM principles, presenting a statement and asking participants to rank their level of agreement on a scale from 1 to 7 (see the example shown in Table 1 below). For analysis purposes, Likert scales were treated as continuous variables, and the median was used as the measure of central tendency for Likert scale data, in line with expert guidance[8].

Table 1 *Likert Scale in Delphi survey.*

(1) Strongly disagree	(2) Disagree	(3) Somewhat disagree	(4) Neutral	(5) Somewhat agree	(6) Agree	(7) Strongly agree
☐	☐	☐	☑	☐	☐	☐

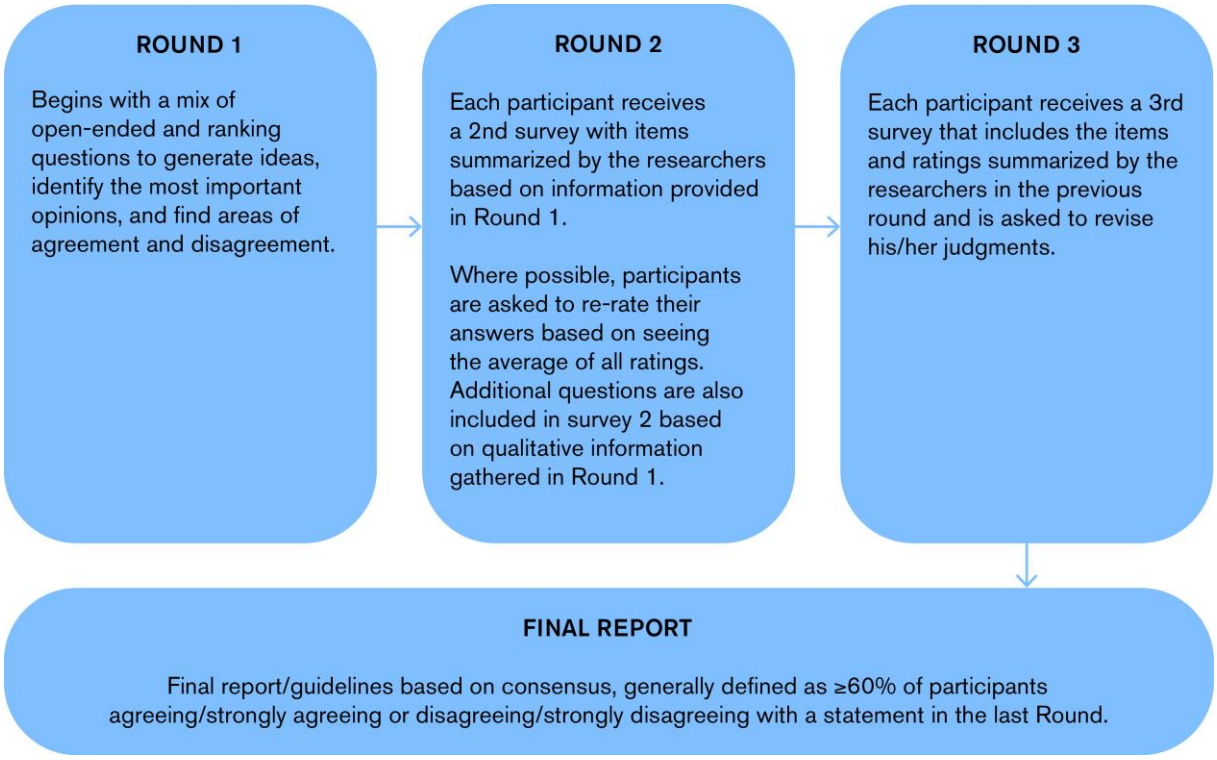
[b] That includes: 1) the top 30 global F&B manufacturers in terms of global sales (responsible for an estimated 30% of global sales of packaged food and beverages), 11 of the largest UK retailers, top companies active in India, out-of-home/food service providers in the UK as well as members of industry associations like WBCSD, CGF, IFBA and BRC; 2) 88 Investor organizations that are members of ATNI's Investors in Nutrition and Health (representing an estimated USD 17.6 trillion AUM -May 2024-); 3) Academics that are members of ATNI's Expert Group and/or known for their international work on nutrient profiling; 4) civil society representatives and policy makers that expressed an interest to participate

There is no singular, standardized approach for determining consensus in Delphi process. However, previous research has applied cut-off values of between 51-80% to indicate alignment[6]. For this research, we have applied the following definitions:

- **Alignment** is achieved when 70% or more of participants select 'agree/strongly agree' (6 or 7) or 'disagree/strongly disagree' (1 or 2) with a statement.
- A **high level of agreement** is achieved when 60% or more (up to less than 70%) of participants select 'agree/strongly agree' (6 or 7) or 'disagree/strongly disagree' (1 or 2) with a statement.

As discussed, each round of the Delphi process included a survey, with the aims outlined in Figure 1. Multiple questions were refined and/or repeated between the rounds to advance progress toward alignment.

Figure 1: *Overview of ATNI's modified Delphi process for NPM alignment.*



Between each of the rounds described in Figure 1, roundtables were conducted to further engage participants, foster collective learning, and gather information. Following Round 1, a roundtable (Roundtable 1) was held to validate and clarify information gathered in that round, including participants' views on the need for and barriers to alignment. The roundtable was also used to realign expectations and ensure participants understood the primary aims of the project.

Using learnings from the first Rounds 1 and 2 as well as Roundtable 1, a second roundtable (Roundtable 2) was held to discuss the results of Round 2 and clarify investor perspectives and approaches to investment in healthier food portfolios and the potential use of NPMs for reporting. Round 3 was conducted after Roundtable 2.

We conducted the process in line with the following principles, gathered from participant input:

- **Dialogue and mutual understanding:** Maintain ongoing discussions to address challenges; encourage alignment through understanding disagreements; accommodate diverse viewpoints to ensure no stakeholder is overlooked; and aim for a consensus that respects public health goals.

- Consensus on reporting: Adopt majority decisions for reporting standards; start with broad agreements on principles, then refine specific components.

Delphi Scope

The focus of this research was to align on one or multiple NPMs to support investor reporting on the healthiness of food industry product portfolios. The NPM alignment initiative was not designed to develop, redesign, create, or combine NPMs; influence consumer behavior practices or front-of-pack labeling or health claim regulations; or direct whether and how NPMs are employed at the country level. In addition, this initiative focused primarily on food and beverage products that are part of regular diets (excluding alcohol or special purpose products such as infant formula, medical foods, or dietary supplements) and their potential to impact human health, not planetary health.

Delphi Reporting

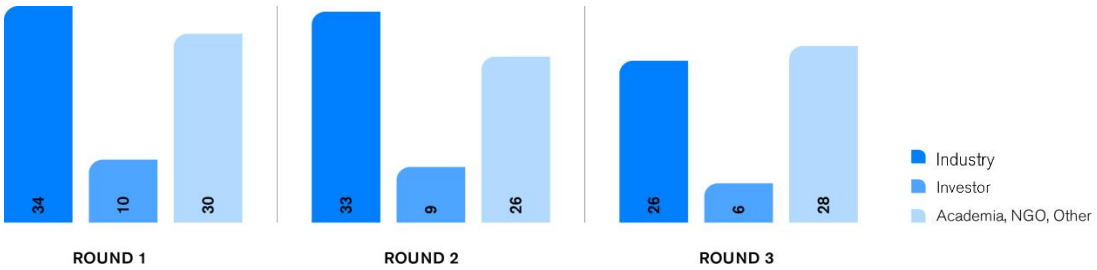
Given the iterative nature of this Delphi process, we have reported on the final result obtained for each component unless otherwise noted in the results section. For example, if a component was evaluated in both Rounds 1 and 2 and the result from Round 2 displayed alignment, the same component was not included for evaluation in Round 3. Thus, we have reported results from Round 2. Similarly, if a component was evaluated in all three rounds, we have reported on the findings from Round 3, since Round 3 represents a culmination of all the steps of the process. Discussion of the results is also included where relevant. Finally, the results have informed the development of the proposed Reporting Guidelines (see “Proposed Guidelines” section).

Results

Participants

As discussed previously, this modified Delphi process used three rounds. The process began with 74 participants, and new participants entered the process in Round 2. Despite frequent communications, reminders, and participant encouragement, there was attrition over the nine-month Delphi period (Round 1: n = 74, Round 2: n = 68, Round 3 = 60). A total of 86 participants participated in at least two rounds during the research process; the number of participants by round is displayed in Figure 2 (see Annex 1 for a detailed list of participants' organizations).

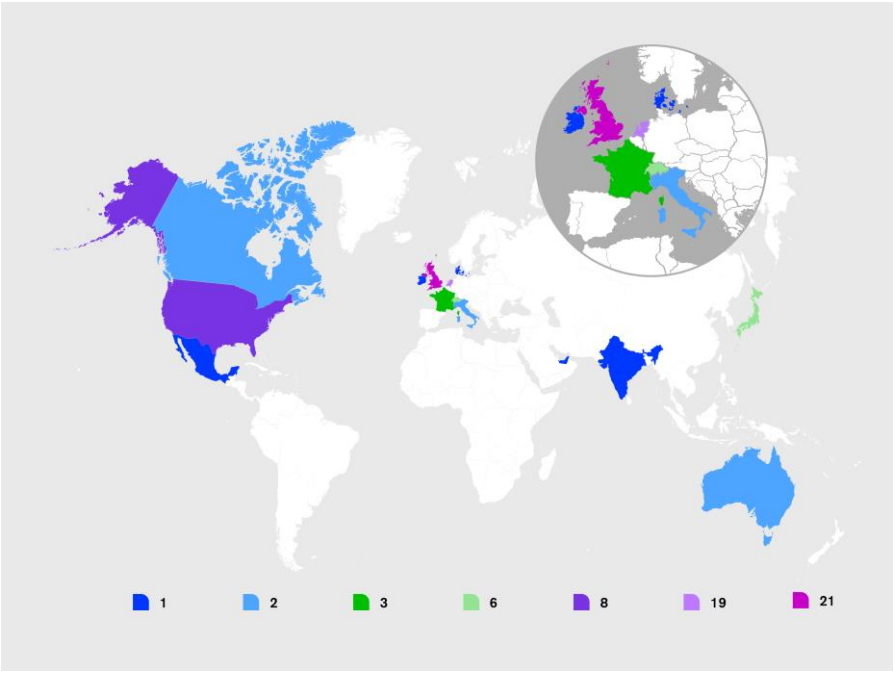
Figure 2. *Number of participants in each round by stakeholder group.*



Investors represented the smallest participant group in all three rounds. Industry, including industry groups, was the largest participant group in Rounds 1 and 2, but in Round 3, academia/NGOs/Others was the largest group. Representatives from all stakeholder groups participated in all three roundtables. Roundtable 1 had 44 participants and Roundtable 2 had 49 participants.

Based on the headquarters location of the organization the participant represented, a total of 14 countries were represented (Figure 3) with the greatest number of respondents from the United Kingdom (21), United States (19), Netherlands (8), Switzerland (6), and Japan (6).

Figure 3: *Delphi participant location.*



Use of NPMs

One objective of the research was to understand how participants currently use NPMs in their work. Most notably, investors reported using NPMs to support responsible investment strategy, industry participants reported using NPMs for product reformulation and product labeling, and other participants relied on NPMs for research and benchmarking. Additional uses of NPMs noted by participants are summarized in Figure 4.

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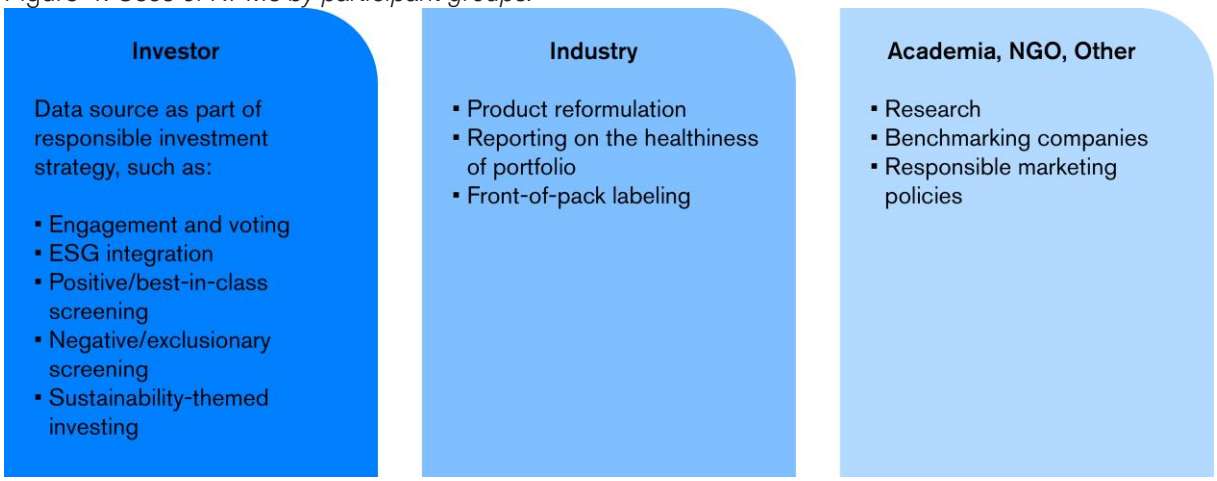
Figure 4: *Uses of NPMs by participant groups.*



Need and feasibility to align

The need and feasibility to align were key principles included in Rounds 1 and 2. There was a **high level of agreement** for the need to align NPMs for the healthiness of portfolios for investor reporting observed in Round 1 (68%), with **alignment** achieved in Round 2 (72%). Participants were less optimistic about the feasibility of aligning NPMs in Round 1 (38%) and Round 2 (28%).

A shift in the overall level of agreement for the need and feasibility to align between Round 1 and 2 can be seen in Figure 5 below. In terms of the need to align, though the overall median score remained at 6 (agree), we observed a shift in the median range from 5-7 (somewhat agree – strongly agree) in Round 1 to 6-7 (agree – strongly agree) in Round 2. While some industry participants expressed stronger disagreement in Round 2 than in Round 1, the other participant groups (investors and academia/NGOs/others) viewed the need more favorably.

Similarly, the perceived feasibility of aligning also improved between Rounds 1 and 2. Though the overall median score remained 5 (somewhat agree), we observed a shift in the median range from 3-6 (somewhat disagree – agree) to 4-7 (neutral – strongly agree). While some industry participants expressed stronger disagreement in Round 2 than in Round 1, there were notable improvements in how other participants (investors, academia, and others) viewed feasibility to align.

Figure 5: *Comparison of participant agreement on the need and feasibility to align on one or multiple NPM(s) to assess and compare the healthiness of portfolios between Rounds 1 and 2.*

The need and feasibility to align were also captured in the qualitative information gathered in the roundtables. There was broad support from all participant groups to promote transparency and allow for fair assessment and comparison among company portfolios. Other statements, detailed in Figure 6 and the bullet points below, included that alignment would:

- Allow for globally standardized reporting;
- Support health-related corporate strategy;
- Drive product reformulation;
- Allow for companies and others to measure progress toward improvement over time;
- Ensure consistency of reporting for non-nutritionist professionals.

Figure 6 *Participant comments supporting the need and feasibility to align on NPMs for reporting.*

Investor	Industry	Academia, NGOs, Other International Organizations
"Alignment is needed for fair and true comparisons between and across companies."	*"Having one or more 'gold standard' NPMs is key for comparability between companies and sectors to ensure consistency of reporting and identify areas for improvement and product development."*	*"NPM alignment is feasible, but management of stakeholder priorities and views will require work."*

Benefits of alignment

In the Delphi process, several benefits of alignment on the use of NPMs for reporting purposes were identified by the different stakeholder groups (shown in Figure 7).

Figure 7: *Benefits of NPM alignment per stakeholder group.*

Furthermore, the investor panel discussion during Roundtable 2 revealed key insights about moving toward alignment:

- **Investor responsibility:** Shareholders have a duty to support health-conscious practices within companies they invest in, with a focus on not harming public health.
- **Importance of investment in healthier food:** Investing in healthier food aligns with the values of clients and companies advocating for labor rights and animal welfare, contrasting with investments in less health-conscious companies.
- **Navigating short- and long-term goals:** There is a need to incentivize leaders and regulatory bodies to prioritize long-term health goals over short-term profit.
- **Transparency and trust:** Transparency is vital to trust and credibility among consumers and investors.
- **Use of NPMs:** Investors do not exclude companies who have portfolios with low NPM scores but rather focus on progress made by companies towards improving the healthiness of their portfolios. Standardized NPMs are crucial for evaluating companies' efforts toward healthier portfolios.
- **Reporting and monitoring:** Investors monitor companies' progress towards sustainable food practices, emphasizing the importance of standardized reporting and third-party audits for credibility.
- **Future directions:** Calls for standardized reporting on healthy foods, potentially overseen by civil society bodies rather than industry, to ensure impartiality and credibility. Need for collaboration between investors, industry, and regulators to make healthy foods accessible globally.

Challenges of alignment

During the Delphi process, several notable challenges to aligning on one or multiple NPMs were identified by participants. Among all participant groups (including industry representatives), industry resistance to adopting NPM reporting standards was highlighted. Other notable challenges included identifying an NPM that is agreeable for all parties; limited global and governmental consensus on what "healthy" means that may make agreeing upon a standard approach difficult; technical capacity for implementation of new reporting standards; and management of stakeholder priorities and views during the Delphi process.

Despite the iterative Delphi process aimed at building consensus, a small group of companies and industry groups (4 out of 26 industry participants in Round 3) expressed consistent disagreement with the possibility of employing one or multiple NPMs to assess and compare the healthiness of portfolios. Their qualitative responses were consistent throughout the research process and reflected the view that all foods can be part of a healthy diet, hence that individual food products or categories should not be evaluated individually by NPMs.

Alignment on NPM principles

Across the rounds, all the key components reached a high level of agreement (>60% selected 6 or 7, agree or strongly agree) or alignment (>70% selected 6 or 7, agree or strongly agree). Further details are highlighted in the sections that follow.

Transparency and governance

Transparency and governance principles include the NPM development process, oversight mechanisms, public endorsements, and algorithm details. Participants showed alignment on all these principles and components for consideration in NPM selection (Table 2).

Table 2: *Levels of agreement on transparency and governance of NPMs.*

	Industry	Investor	Academia/ Other	**Total**
The rationale and process followed to develop the NPM is publicly available.	88%	100%	100%	**94%**
The NPM's governance details (for example who oversees challenges, changes, or questions) are accessible to the public.	84%	100%	96%	**91%**
The NPM is endorsed by government or scientific institutions.	78%	100%	88%	**85%**
The nutrient thresholds are publicly available.	81%	100%	96%	**90%**
The underpinning algorithm is publicly available.	84%	89%	92%	**88%**

Results above reflect responses from Round 2 participants (total: 68, industry: 33, investors: 9, academia/others (including NGOs): 26). Green check circles are used to show components where alignment of ≥70% was reached; the percentage displayed in each box is based on the number of participants who chose 6 or 7 on the Likert scale. Blank responses were not included in the total calculations.

Underlying principles

Underlying principles to inform NPM candidate selection include alignment with national and/or international dietary guidelines, regular review of the NPM algorithm, and reporting metrics. Participants expressed alignment with the principles outlined in Table 3 for consideration in NPM selection. All the key components reached a high level of agreement (>60% selected 6 or 7, agree or strongly agree) or alignment (>70% selected 6 or 7, agree or strongly agree).

Table 3: *Results for key components of underlying principles of NPMs.*

	Industry	Investor	Academia/ Other	**Total**
The NPM includes nutrient thresholds which are based on (inter-)national dietary guidelines.	46%	100%	82%	**68%**
The NPM includes which (inter-)national dietary guidelines are used as a reference, stating clearly how these guidelines are integrated into the model.	69%	100%	88%	**81%**
The nutrient thresholds and/or underpinning algorithm are regularly reviewed and updated.	72%	100%	96%	**85%**
The NPM algorithm should report results based on a continuous value or score of healthiness of a food product (e.g., a score from 1-100, score from 0-5, letter grades from A-E).	75%	100%	67%	**75%**

Results from row 1 above reflect responses from Round 3 participants (total: 60, industry: 26, investors: 6, academia/others (including NGOs): 28), rows 2 and 3 above reflect responses from Round 2 participants (total: 68, industry: 33, investors: 9, academia/others (including NGOs): 26), and row 4 above reflects responses from Round 1 participants (total: 74, industry: 34, investors: 10, academia/others (including NGOs): 30). Green circles are used to show components where alignment of >70% was reached. Yellow circles are used to show components where there is a high level of agreement at >60% was reached. Orange circles are used to show where no agreement was reached <60%. The percentage displayed in each box is based on the number of participants who chose 6 or 7 on the Likert scale. Blank responses were not included in the total calculations.

There was a difference in alignment regarding the selection of an NPM that includes nutrient thresholds based on (inter-)national dietary guidelines between Round 1 and Round 3 (see Table 3). Although investor agreement increased from 80% to 100%, industry agreement decreased from 82% to 46%, academia/NGOs/others decreased from 87% to 82% in Round 3. So total agreement decreased from 84% in Round 1 to 68% in Round 3. In Round 3, the qualitative comments for those who selected a score of 4 or lower for the selection of an NPM that includes nutrient thresholds based on (inter-)national dietary guidelines displayed poor support for using NPMs to assess the healthiness of portfolios in general, without offering an alternative solution. In addition, it is also important to note that the top selected NPMs detailed in the "Nutrient Profile Model" section, align with international dietary guideline thresholds.

While there was good support for applying an NPM with a continuous value (as noted in Table 3) and poor support for using a binary or dichotomous approach (29% agreed or strongly agreed) in Round 1, these components were validated in Round 3 wherein participants were asked to choose from the following:

- It is important for the NPM to classify the healthiness of foods, categories, or portfolios using a **continuous value** (e.g., a reported value between 1 and 5) – selected by 64% of participants.
- It is important for the NPM to classify the healthiness of foods, categories, or portfolios using a **binary value** (e.g., a reported value as "healthy" or "not healthy") – selected by 10% of participants.
- The NPM can classify the healthiness of foods, categories, or portfolios using a continuous value or binary value (indicated as **"Either option is acceptable"**) – selected by 26% of participants.

Viewed together, these results support the application of a continuous value.

Nutrition Information

Participants were asked to list priority nutrients for inclusion in the NPM algorithm. A total of 25 nutrients/ food components were listed by participants, and Figure 8 summarizes the top 10 which include fruits and vegetables, protein, sodium, and more.

Figure 8: *The top 10 priority foods and nutrients that participants identified were essential for inclusion in the NPM algorithm.*

	Top 10 Priority Foods & Nutrients
1	Fruits and vegetables
2	Sodium
3	Vitamins and minerals
4	Fiber
5	Saturated fats
6	Protein
7	Energy content
8	Added/free sugars
9	Whole grains
10	Total fat

Though vital for health, micronutrients are not included in most existing NPMs. Participants did not express clear agreement on the relevance of micronutrients for alignment on NPMs for investor reporting. However, further consideration of the micronutrient content of foods, including both naturally occurring and those added to foods via fortification, could be explored in future research projects. Table 4 includes the results for other nutrition-related NPM components, including category, coverage, and reference units.

Table 4: *Results for key components of nutritional information for NPMs.*

	Industry	Investor	Academia/ Other	**Total**
Nutrients/food components to encourage	81%	89%	77%	**81%**
Nutrients/food components to limit	97%	100%	100%	**99%**
Category: Food-category specific criteria	66%	78%	50%	**61%**
Coverage: Packaged foods and beverages	66%	89%	69%	**70%**
Reference Unit: Per 100g of the product	55%	70%	77%	**66%**
Reference Value: Product as sold	58%	80%	83%	**71%**

The results in rows 1, 3, and 4 above reflect responses from Round 2 participants (total: 68, industry: 33, investors: 9, academia/others (including NGOs): 26). The results in rows 2, 5, and 6 above reflect responses from Round 1 participants (total: 74, industry: 34, investors: 10, academia/others (including NGOs): 30). Green circles are used to show components where alignment of >70% was reached. Yellow circles are used to show components where there is a high level of agreement at >60% was reached. Orange circles are used to show where no agreement was reached <60%The percentage displayed in each box is based on the number of participants who chose 6 or 7 on the Likert scale. Blank responses were not included in the total calculations.

As shown in Table 4 above, a high level of agreement (>60% selected 6 or 7, agree or strongly agree) was reached for adopting food category-specific criteria, despite poor scores from both industry and academia/NGOs/others. The alternative option of using a single consistent scoring criteria for all food products and categories was explored in Round 1, but scored low across the board and did not reflect alignment for any participant groups (total: 41% scored 6 or 7, agree – strongly agree; 29% industry, 30% investors, 57% academia/NGOs/others).

While there was a high level of agreement on the reference unit per 100g of the product as noted in Table 4 above, agreement was not universal among stakeholder groups. There was alignment (>70% scored 6 or 7) by investors and academia/NGOs/other. However, industry representatives did not support this selection. Importantly, **overall participant alignment and industry alignment were lower for the alternative options:** reference unit per 100kcals of the product (total: 34% scored 6 or 7, agree – strongly agree; 29% industry, 40% investors, 37% academia/NGOs/others) and per portion (total: 56% scored 6 or 7, agree – strongly agree; 52% industry, 100% investors, 47% academia/NGOs/others).

Similarly, the reference value for the NPM calculation (for the product 'as sold') was also not well supported by industry representatives. While there was alignment (>70% scored 6 or 7) by investors and academia/NGOs/others for selecting an NPM with a reference value based on the product as sold, industry representatives did not support this. Though less preferable for investors and academia/NGOs/others, industry members appeared to favor applying a reference value based on the product as prepared according to package instructions (total: 59% scored 6 or 7, agree – strongly

agree; 72% industry, 60% investors, 47% academia/NGOs/others), though this approach failed to reach a high level of agreement or alignment.

Peer-review

The peer review process for NPMs is an important component of external validation and review by other experts. Participants expressed alignment with the principles outlined below for consideration in NPM selection. As noted in Table 5, alignment was reached for both components (>70% selected 6 or 7, agree or strongly agree).

Table 5: *Results for key components of the peer review process for NPMs.*

	Industry	Investor	Academia/ Other	**Total**
The review process and updates are publicly available.	78%	89%	100%	**88%**
The NPM is peer-reviewed and published in an open access journal.	79%	80%	77%	**78%**

Results displayed in row 1 above reflect responses from Round 2 participants (total: 68, industry: 33, investors: 9, academia/others (including NGOs): 26). Row 2 results were obtained from Round 1 participants (total: 74, industry: 34, investors: 10, academia/others (including NGOs): 30). Green circles are used to show components where alignment of >70% was reached; the percentage displayed in each box is based on the number of participants who chose 6 or 7 on the Likert scale. Blank responses were not included in the total calculations.

Nutrient Profile Model selection

Given the diversity of NPMs available, pragmatism is important for considering how to apply and implement NPMs for investor reporting. Most participants support using a flexible approach that employs 2-4 NPMs for reporting. Although participants did not fully align on this approach, we observed that 67% of participants scored this concept at 5 or above (somewhat agree, agree, or strongly agree), with 47% of participants scoring this approach 6 or 7 (agree or strongly agree). Of those who expressed disagreement, (n = 5 industry; n = 1 academia/NGOs/others), three participants (5%) suggested that only one NPM should be selected.

In Round 1, participants listed 16 different NPMs to be considered as the most appropriate to assess and compare the healthiness of portfolios. From these answers, we compiled a top 10 list of NPMs[c]. In Round 2, participants were asked to rank the most relevant NPMs for consideration for investor reporting based on the top 10 most relevant NPMs identified in Round 1.

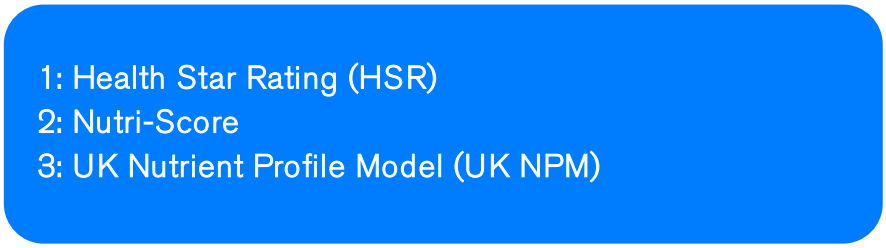
The top three NPMs selected by participants are summarized in Figure 9. The scores for the top three NPMs are as follows (scale 1= least relevant, 10 = most relevant): HSR (7.9), Nutri-Score (7.3), and UK NPM (6.6). The WHO NPM (5.7) was initially selected as a fourth NPM option, though it was unclear as to which WHO model participants were referring to since there are multiple regional WHO NPMs. For that reason, the research team elected to focus on the top three identified NPMs (HSR, Nutri-Score, and UK NPM). Participants did not favor the inclusion of other NPMs, including the Chilean Black Octagonal NPM or Choices International (20% of participants selected 6 or 7, agree or strongly agree).

[c] Health Star Rating (HSR), Nutri-Score, UK NPM, WHO nutrient profile models, UK Traffic light labeling, Nutrient Rich Food (NRF), Food Compass, Nordic Keyhole, Choices International, Stop-Sign warning labels

A comparative analysis of these four NPMs is available in the "Nutrient Profile Model Comparative Analysis" section that follows.

Overall, participants from academia/NGOs/others favored portfolio reporting using the four selected NPMs (13/28; 46%), investors favored reporting results using at least two of the selected NPMs (5/6; 83%), and industry favored reporting on one of the selected NPMs (19/24; 79%).

Figure 9: *The NPMs identified as the most relevant to assess and compare the healthiness of portfolios.*[d]



The three NPMs selected aligned with the principles and components identified during the Delphi rounds (previously detailed in the "Alignment on NPM principles and components" section). These NPMs all maintain transparency and disclose governance details publicly, align nutrient thresholds with international dietary guidelines, and their corresponding algorithms are regularly reviewed and updated. All three NPMs report healthiness using an underlying continuous value or score, include key nutritional metrics such as nutrients to encourage or limit, have food-category-specific scoring criteria, and have a reference unit per 100g of the product as sold. Finally, all three NPMs have been peer-reviewed and updates are publicly available.

Reporting standards

Across all three Delphi rounds, participants were asked about their perspectives on general NPM reporting standards, what should be included in standardized NPM reporting, and how NPM reporting should be conducted. Overall, there was more support for **mandatory reporting** (Round 3: 53% agree or strongly agree; industry: 27%, investors: 100%, academia/NGOs/others: 68%) than for voluntary reporting (Round 3: 35% of participants agree or strongly agree; industry: 46%, investors: 83%, academia/NGOs/others: 14%). As noted, large differences were observed between stakeholder groups. Industry representatives expressed strong opposition to mandatory reporting (39% scored 1-3), and investors and other participants indicated strong support for mandatory reporting.

Despite disagreement over a mandatory vs. voluntary reporting approach, participants were aligned on the principle that **corporate reporting standards** should include reporting against a government-endorsed or (inter)nationally recognized NPM (e.g., HSR, Nutri-score, UK NPM) with 78% of participants agreeing or strongly agreeing with this concept (industry: 62%, investors: 100%, academia/NGOs/others: 89%). Additionally, participants were aligned on multiple other standards as detailed in the sections that follow.

[d] There are 6 regional models developed by WHO regions to determine if products would be eligible to be marketed to children. For this process (including the comparative analysis) the second edition of the nutrient profile model for the WHO European Region (NPM 2023) is used.

Methodology and data quality

Alignment was achieved in multiple areas of **methodology and data quality**. Participants were aligned on reporting on which NPM was used and how the NPM guidelines were applied to assess the healthiness of the company's portfolio (85% agree or strongly agree). Participants also aligned on reporting on data sources used (e.g., nutrient composition data, sales data) (79% agree or strongly agree), information on missing values (76% agree or strongly agree), and information on inclusions/exclusions of products (e.g. certain products or product categories not taken into account, such as baby food, plain coffee/tea, supplements, etc.), including any deviations from the NPM guidelines (79% agree or strongly agree).

Additional oversight and methodological considerations are further discussed in the reporting mechanism section, together with details on the suggested audit process.

Audit processes

A defined **audit process** is an important aspect of NPM reporting quality control. Participants were aligned on the inclusion of information on the oversight process (e.g. executive committee, expert consultations) (73% of participants agree or strongly agree; industry: 66%, investors: 100%, academia/NGOs/others: 73%).

Further, there was a high level of agreement on the **inclusion of an external audit process** (61% of participants agree or strongly agree; industry: 45%, investors: 75%, academia/NGOs/others: 76%) noted in Round 2. In Round 3, participants were asked to select the approach they most favored: company analysis with third-party validation (total: 35%, industry: 8%, investors: 17%, academia/NGOs/others: 61%), third-party analysis (total: 33%, industry: 58%, investors: 33%, academia/NGOs/others: 14%) or no preference (total: 28%, industry: 27%, investors: 50%, academia/NGOs/others: 25%).

Though perspectives differed among participant groups, there was support for the following mechanisms to ensure quality control and oversight:

- Companies analyze the data themselves according to an agreed protocol, then the analysis is verified or audited by a third party to ensure the data has been assessed in the same way and results are comparable; or
- Companies provide data to a third party (e.g., ATNI, MSCI, or others), and this central body analyses the data according to an agreed protocol and publishes the results.

Foundational standards for NPM reporting

Foundational standards provide the structural basics for NPM reporting, including reporting on NPM results for the full portfolio and by product category and reporting on results by region or market, as shown in Table 6 below.

Table 6: *Foundational areas of alignment for corporate reporting.*

	Industry	Investor	Academia/ Other	**Total**
NPM results for full portfolio	77%	88%	85%	**81%**
NPM results by product category	69%	88%	92%	**81%**
Reporting on portfolio level per region/market	31%	67%	86%	**60%**

Results from rows 1 and 2 above reflect responses from Round 2 participants (total: 68, industry: 33, investors: 9, academia/others (including NGOs): 26). Row 3 reflects responses from Round 3 participants (total: 60, industry: 26, investors: 6, academia/others (including NGOs): 28). Green circles are used to show components where alignment of >70% was reached. Yellow circles are used to show components where there is a high level of agreement at >60% was reached. Orange circles are used to show where no agreement was reached <60%The percentage displayed in each box is based on the number of participants who chose 6 or 7 on the Likert scale. Blank responses were not included in the total calculations.

Not included in Table 6 are results for exactly *how* to report on **portfolio healthiness.** Responses to questions about reporting were diverse across the three rounds. In Round 3, participants were presented with a multiple-choice (rather than a Likert scale) question and asked to select one option for how portfolio healthiness should be reported. The options and percentage of participants opting for each were as follows:

- Using a binary approach (e.g., percentage of products meeting a specific threshold that is defined as 'healthier') – selected by 17% of participants.
- Using distribution across ratings or levels of 'healthiness' (e.g., level 1: 20%; level 2: 30%; level 3: 50% of products) – selected by 35% of participants.
- Either binary **or** a distribution – selected by 22% of participants.
- Both approaches (binary **and** distribution) – selected by 23% of participants.

Though none of these options generated alignment as defined by the project (≥70% agree or strongly agree), it appears that reporting **using a distribution across ratings of healthiness would be most satisfactory across participant groups**.

Though there was poor industry support for portfolio reporting by region or market, this idea was supported by investors and academia/NGOs/others as noted in Table 6. Overall, the combined scores across the three participant groups reflected a high level of agreement with 60% selecting agree or strongly agree for this metric.

Portfolio reporting

General portfolio reporting standards include reporting on the contents of the portfolio, including the total number of products and percentage of 'healthier' products. While investors and academia/NGOs/others were aligned on the need to report on four of the five components, industry representatives did not support any of the reporting components summarized in Table 7.

Table 7: *Results of alignment for reporting on portfolio healthiness.*

	Industry	Investor	Academia/ Other	**Total**
Number of products in the full portfolio	29%	100%	81%	**61%**
Number of products in the portfolio by category	17%	100%	93%	**61%**
Number of products in the portfolio by region/ market	21%	67%	78%	**53%**
Percentage of 'healthier' / 'unhealthier' products in terms of numbers (n)	41%	83%	93%	**68%**
Percentage of 'healthier' / 'unhealthier' products in terms of volumes (e.g., kg, liters, units)	46%	33%	73%	**63%**

Results above reflect responses to binary (yes/no) questions asked of Round 3 participants (total: 60, industry: 26, investors: 6, academia/others (including NGOs): 28). Green circles are used to show components where alignment of >70% was reached. Yellow circles are used to show components where there is a high level of agreement at >60% was reached. Orange circles are used to show where no agreement was reached <60%The percentage displayed in each box is based on the number of participants who chose 6 or 7 on the Likert scale. Blank responses were not included in total calculations.

While reporting on the percentage of 'healthier' or 'unhealthier' products in terms of volumes (e.g., kilograms, liters, units) did yield a high level of agreement because of strong support from academia/NGOs/others, alignment was not reached amongst investors for this component. Though the result was notable to include in this research, this metric was not integrated into the proposed Reporting Guidelines ("Proposed Reporting Guidelines" section). Since the aim of the project is to support investor reporting on portfolio healthiness, it was determined that the metrics should be meaningful to the investor community.

Financial reporting

Financial reporting standards aim to summarize sales/revenue and profit based on NPM results. While alignment was reached for sales/revenue data as shown below, strong industry opposition and lower levels of alignment in the other participant groups resulted in poor overall alignment scores for measures of profitability based on NPM results. Industry participants also noted reporting profits by product may be particularly challenging (Table 8).

Table 8: *Results of alignment on financial reporting.*

	Industry	Investor	Academia/ Other	**Total**
Total sales/revenue from packaged food and beverages, ONLY of those products eligible to be assessed according to the NPM	58%	100%	89%	**77%**
Percentage of sales/revenue from 'healthier' / 'unhealthier' products	71%	100%	93%	**84%**
Total profit from packaged food and beverages, ONLY of those products eligible to be assessed according to the NPM	0%	67%	63%	**37%**
Percentage of profit from 'healthier' / 'unhealthier' products	4%	67%	74%	**44%**

Results above reflect responses to binary (yes/no) questions asked of Round 3 participants (total: 60, industry: 26, investors: 6, academia/others (including NGOs): 28). Green circles are used to show components where alignment of >70% was reached. Yellow circles are used to show components where there is a high level of agreement at >60% was reached. Orange circles are used to show where no agreement was reached <60%The percentage displayed in each box is based on the number of participants who chose 6 or 7 on the Likert scale. Blank responses were not included in total calculations.

Reformulation, marketing, and lobbying activities

In Round 2, participants were asked about the need for reporting to reflect **changes in NPM results and reformulation efforts** (see Table 9 below). Both components showed alignment with support from all three participant groups. Though there appears to be less support from academia/NGOs/others on reporting on reformulation efforts (65% selected 6 or 7, agree or strongly agree), the balance of participants (35%) selected 5 (somewhat agree); none were opposed to reporting on reformulation efforts.

In Rounds 2 and 3, participants were also asked about reporting on portfolio **marketing and lobbying activities**. While reporting on these activities was well supported by investors and academia/NGOs/others, many industry participants did not endorse reporting on marketing and lobbying activities; results from Round 3 are displayed in Table 9.

Table 9: *Results of alignment on reformulation, marketing, and lobbying activities.*

	Industry	Investor	Academia/ Other	**Total**
Change in NPM results over time	80%	100%	100%	**91%**
Reformulation efforts and initiatives	73%	89%	65%	**72%**
Marketing spending on 'healthier' vs. 'unhealthier'	27%	100%	96%	**67%**
Marketing techniques used for 'healthier' vs. 'unhealthier' products	27%	83%	78%	**56%**
Lobbying for or against health and nutrition policy measures	34%	100%	89%	**67%**

Results from rows 1 and 2 above reflect responses from Round 2 participants (total: 68, industry: 33, investors: 9, academia/others (including NGOs): 26). Rows 3-5 reflect responses from binary (yes/no) questions asked of Round 3 participants (total: 60, industry: 26, investors: 6, academia/others (including NGOs): 28). Green circles are used to show components where alignment of >70% was reached. Yellow circles are used to show components where there is a high level of agreement at >60% was reached. Orange circles are used to show where no agreement was reached <60%The percentage displayed in each box is based on the number of participants who chose 6 or 7 on the Likert scale. Blank responses were not included in the total calculations.

Proposed Reporting Guidelines

Based on findings gathered during this Delphi process, and ATNI's expertise on the topic, elements that should be part of a standardized framework for reporting were identified. Standardized reporting is needed to ensure transparency, a level playing field, comparing portfolios and reformulation efforts, and providing clear direction for nutrition-focused reporting and investment.

Reporting employs one or multiple of the selected Nutrient Profile Models: ▪ **Health Star Rating (HSR)** ▪ **Nutri-Score** ▪ **UK NPM**	Companies can be offered the option to report against one or multiple of the selected NPMs.	✓
Methodology includes details of the NPM guidelines applied, data sources used, missing values, relevant inclusions/exclusions of products, and any deviations from the NPM guidelines.	Information in the NPM reporting methodology should be used to inform the reader of background information, deviations, assumptions, and other factors that influence how reporting was carried out. It should also include any products or categories not included in reporting (e.g., baby food, coffee/tea, supplements).	✓
Reporting includes details of the audit process and is conducted or validated by an impartial third party using a standardized protocol.	An audit process via an executive committee, expert consultations, or another method is important to ensure reporting quality. External reporting or validation helps ensure the NPM is correctly applied to the portfolio and the results of NPM reporting are accurate.	✓
Results are reported for the overall portfolio globally, by product category, and if relevant by region and/or country.	NPM results are reported for the full portfolio and by product category for all products eligible to be assessed according to the NPM. A distribution of results (e.g., level 1: 20%; level 2: 30%; level 3: 50% of products) classifying healthiness should be applied.	✓
Reporting includes the number of products in the full portfolio and by category and includes the percentage of products scored as 'healthier' or 'unhealthier'.	In addition to sales/revenue reporting, the percentage of products (number) aids investors and others in understanding how many items in the portfolio meet the 'healthier' qualification. Additionally, this metric could be important for monitoring the change in portfolio results over time.	✓
Reporting includes total sales and the percentage of sales from 'healthier' and 'unhealthier' products eligible to be assessed with a NPM.	Total sales/revenue reporting focuses on only those products eligible to be assessed according to the relevant NPM.	✓
Reporting showcases the change in sales-weighted NPM results over time and highlights reformulation efforts that have occurred.	The change in NPM results over time will allow industry, investors, and others to monitor how and if the overall healthiness of portfolios changes year to year. Reporting on reformulation efforts will also inform the reader about new initiatives that may change the healthiness of portfolios.	✓
Reporting on marketing spending for healthier vs. unhealthier products and lobbying information related to health and nutrition policies.	Measuring and reporting on marketing spending on 'healthier' vs. 'unhealthier' products as well as lobbying efforts for or against health and nutrition policy measures highlights company actions that may support or undermine health-focused efforts and progress.	✓

The criteria marked with a green tick are those that represent alignment across all three participant groups: industry, investors, and academia/NGOs/others. The criteria marked with a yellow tick are those where a high level of agreement was reached with good support from two participant groups: investors and academia/NGOs/others. These three components received limited industry support, though the metrics remain relevant and important for portfolio healthiness reporting.

Limitations

We acknowledge there are some limitations of this Delphi process that may be important to consider. First, many of the Delphi participants were recruited through ATNI's network and were based in Europe and the US. Though some individuals from other parts of the world participated in the process, we acknowledge that the overall sample may not be globally representative, and results may have differed if a different sampling methodology had been employed.

Second, despite individual invitations and repeated email reminders, there was some attrition and not all participants contributed to each round, and about 35% of participants did not participate in roundtable events over the nine-month research process. In addition, new participants entered the process after Round 1, though it is unclear as to what motivated their participation. For example, late-entry participants may have learned about the research after it had begun, or they may have been recruited by others already involved in the process with similar interests to bolster support. It is unclear how the changes in participants, both the loss of participants and the entry of new participants, may have influenced our findings.

Thirdly, there was an over-representation of industry representatives in the Delphi process, especially in comparison to the small group of investor participants. Though strong industry participation had the potential to bias the research in favor of industry interests, we found that there were areas of alignment achieved even with limited industry support. In addition, we have highlighted findings wherein a high level of agreement was achieved, sometimes only with investor and academia/NGOs/others participant support. These findings have been included throughout this report and are reflected in the proposed Reporting Guidelines.

Future directions

Implementation considerations

In the process of developing proposed NPM Reporting Guidelines, important considerations emerged to facilitate implementation. Resources are needed to support implementation, including establishing validation systems for third-party validation of NPM results, technical assistance for companies to gather and report on portfolio results, and NPM algorithm development.

Participants aligned on the need for NPM calculation tools and resources (81% selected 6 or 7, relevant or absolutely relevant), and guidance and training on how to apply NPMs (84% selected 6 or 7, relevant or absolutely relevant). Furthermore, industry participants highlighted the need for internal support and protocols to update their nutrition database of products and ingredients across markets (93% selected 6 or 7, relevant or absolutely relevant), compile sales data across markets (79% selected 6 or 7, relevant or absolutely relevant), and update reporting protocols and templates across markets (83% selected 6 or 7, relevant or absolutely relevant).

Overall, concerns about implementation were identified during the process; 57% of participants indicated the time investment required for reporting as a concern, 62% mentioned concerns about the accuracy of results and audit information, and 72% expressed concerns about the comparability of results among companies. Industry participants also ranked cost and sharing of proprietary information as significant concerns for NPM reporting.

Finally, given the resources and systems needed for implementation of NPM reporting standards, participants endorsed a potential implementation timeline of 6-12 months (41%) or longer (50%).

Additional topics to consider

Multiple topics, including micronutrients and fortification; level of processing; and environmental, social, and governance (ESG) integration; were highlighted during the Delphi process but were not addressed due to limitations of the existing NPMs and other factors. The insights below were captured in qualitative responses provided during Rounds 1 and 2:

- Micronutrients and Food Fortification: Participants indicated the importance of micronutrients given the current burden of undernutrition, micronutrient deficiencies, and overweight and obesity. Most NPMs do not explicitly include micronutrients but use proxy indicators (e.g., fruits, vegetables, protein) to account for micronutrient composition of the food products. To fully account for micronutrient contents, including from food fortification, it is likely that existing NPMs would need to be adapted or new NPMs developed. Additional research could assess the extent to which new or updated NPMs have incorporated or could incorporate micronutrients, particularly to evaluate the relevance of NPMs for in use in markets where micronutrient deficiencies constitute a large public health burden.
- Level of processing: Participants mentioned the level of food processing as an important topic. However, they also highlighted the lack of global consensus on the classification of foods in terms of processing levels in both the policy and investment space and noted the need for further understanding of the health implications of particular ingredients, compounds, and methods used in food processing. Additional research is needed to address these research and knowledge gaps together with the development of practical classification systems[9].
- ESG integration: Participants noted the need for integration of health and nutrition indicators into ESG ratings for food manufacturers and indicated that the outcomes of this Delphi process may

provide guidance on what those indicators may be. It was acknowledged that the nutritional impact of products is as vital as other sustainability factors, and integrating these indicators into ESG reporting would drive positive change in the industry.

These topics are critically important and, with additional research, will support continued efforts to prioritize health and nutrition in industry reporting, future product development, and food system research. To build on knowledge of these and other topics, additional research and investment will be required.

Next Steps

Participants expressed broad support and commitment to continue involvement with the next steps in applying the aligned proposed Reporting Guidelines established by this NPM Delphi initiative (Figure 10). Overall, 72% of participants of Round 3 expressed continued interest in continuing to engage in the next phases of this work (62% industry, 67% investors, 82% academia/NGOs/others).

Figure 10*: Illustrative comments from participants in continuing to commit and engage on the next steps of reporting.*

Investor	Industry	Academia, NGOs, Other
"We are happy to help pilot Reporting Guidelines in our engagements with food and beverage companies and provide feedback to further strengthen this important work."	*"We would be willing to engage on how we can pilot / model the outcome proposal."* *"We are indeed willing to continue to support this initiative as we believe pushing for portfolio improvement and increasing transparency is a critical step towards healthy and balanced diets."*	*"I think this initiative is a good start towards a healthier supply of foods, which we need to aim for, therefore I would like to participate."* *"This is an important area and getting it right is key."*

In addition, many participants expressed willingness to make a public statement on their continued commitment later in the year (43% total: 19% industry, 83% investor, 57% academia/NGOs/others).

After concluding this Delphi process with this final report, ATNI organized a multi-stakeholder event in September 2024 to discuss and leverage next steps focused on implementation of the developed NPM proposed Reporting Guidelines.

Conclusion

Diets are diverse and, in many parts of the world, they include both packaged and unpackaged foods. While individual foods are each only parts of a whole diet, it is important to acknowledge that packaged foods, and the healthiness of those foods, influence food environments, consumer purchasing patterns, and dietary choices. Activities aimed at improving retail food environments, including those that endeavor to influence what companies produce, can play an important role in improving consumer diets. While there is no global "gold standard" NPM for investor reporting, there is an opportunity to apply one or multiple NPMs to measure, evaluate, and monitor the healthiness of company portfolios. This research has identified many potential benefits of using NPMs to support responsible investment strategy, including fair assessment and comparison among portfolios, reporting consistency, evidence-based investment decision-making on 'healthiness' of portfolios, improved transparency, and monitoring of product nutrition quality over time. There may be benefits to reporting on results from multiple NPMs, including fully standardized comparison among portfolios and nuanced measurement differences captured via different approaches. However, this level of reporting may be challenging without systems in place to support reporting, including data gathering, analysis, and validation. It may be more practical to begin standardized reporting using one or multiple of the proposed NPMs to accommodate systems in place and hold the possibility for expanding reporting in the future.

This Delphi process provided the opportunity to balance interdisciplinary engagement while acknowledging diverse interests and perspectives across three rounds of activities. There was optimism and high support for the need and feasibility to align across all groups in Rounds 1 and 2. Further, alignment on the underlying principles, components, and top NPMs was reached throughout the process. In Round 3, as we delved more into the details of reporting standards, there appeared to be less consensus. For example, companies strongly favored voluntary over mandatory reporting mechanisms, and opposed reporting on marketing, lobbying, profits, and other metrics. Other concerns also emerged, with non-industry participants expressing dissatisfaction with industry involvement in the process of selecting NPMs and contributing perspectives on reporting mechanisms.

After the three rounds of the Delphi process, we developed proposed Reporting Guidelines with reporting criteria selected based on participant alignment ($\geq$70% agree or strongly agree) and high level of agreement ($\geq$60% agree or strongly agree). The framework includes guidelines that recommend reporting on the following:

- Results from one or multiple Nutrient Profile Models: Health Star Rating (HSR), Nutri-Score, or UK NPM.
- Methodology of reporting includes details of the NPM guidelines applied, data sources used, handling of missing values, relevant inclusions/exclusions of products, and any deviations from the NPM guidelines.
- Details of the audit process which is conducted or validated by an impartial third party using a standardized protocol.
- Results are reported for the overall portfolio globally, by product category, and if relevant by region and/or country.
- Total number of products in the full portfolio and the number by product category, and includes the percentage of products scored as 'healthier' or 'unhealthier'.
- Total sales and the percentage of sales from 'healthier' and 'unhealthier' products.
- Showcases the change in sales-weighted average NPM results over time and highlights reformulation efforts that have occurred.

- Reporting on marketing spending for healthier vs unhealthier products and lobbying information related to health and nutrition policies.

The NPM Delphi initiative received strong support from a diverse range of stakeholders representing industry, investors, academia, and beyond, and many participants expressed continued interest in engaging in the next phases of this work. Several key investor organizations, including those within ATNI's Investors in Nutrition and Health (AINH), committed to using standardized proposed Reporting Guidelines and one of the three NPMs in their engagement with companies. This adoption will enhance investors' ability to interpret and compare the healthiness of companies' product portfolios.

ATNI and its investor partners call on companies to benchmark their product portfolios against one or more of the three NPMs listed above and to utilize the proposed Reporting Guidelines so that they can better gauge and compare the healthiness of their products and sales.

Nutrient Profile Model comparative analysis

This analysis is independent of the Delphi process and it was done to evaluate and compare the performance of the four most relevant NPMs (HSR, Nutri-Score, UK NPM, and WHO Euro NPM[e]) across 17 different product categories (as outlined in Table 10) and the portfolios of four types of company portfolios: mixed, indulgent, dairy, and beverages. The analysis will highlight the similarities and differences between the four NPMs in these contexts, providing detailed insights and additional background information. The WHO Euro model is included here as a 4th model to enrich the comparison. It was not clear from the surveys which of the six existing regional WHO models (that differ significantly in their approach and nutrient thresholds) participants had in mind, therefore it is not included in the top three selected NPMs.

Methods

Data

Data was sourced from four companies in the Global Index 2024 presenting a variety of portfolio types adding up to a total of 6,211 products[f]. All results were presented overall and by Euromonitor International category[g]. Based on the available data, 17 categories were identified. Products were also assigned to either 'foods' or 'beverages' under the UK NPM, assigned to one of six categories under the Health Star Rating, assigned to one of 21 WHO categories and assigned to one of five category types (general foods, beverages, fats, red meat, cheese) under Nutri-Score.

Nutrient profiling models

UK Nutrient Profile Model

The UK NPM was developed by the Food Standards Agency (FSA) in 2004-2005 as a tool to help the UK regulator for communications services (Ofcom) differentiate foods and improve the balance of television advertising to children.[10] In the UK NPM points are allocated for "negative" nutrients i.e. energy, saturated fat, total sugars, and sodium, which are then adjusted using "positive" nutritional elements such as the proportion of fruits/vegetables/nuts, fiber, and protein. Products meeting a score of <4 for foods and <1 for drinks are deemed more nutritious options. In 2018 an update to the model was developed but not formally agreed.[11]The 2004/2005 algorithm was used in this report.

Nutri-Score

Nutri-Score is a front-of-pack labeling NPM that provides an overall rating on the nutritional quality of food and beverages, using five different colors to classify food products into five categories: from category A (dark green), indicating higher nutritional quality, to category E (dark orange), indicating lower nutritional quality.[12] This rating system was developed to help guide consumers towards healthier food choices and thus prevent a wide range of nutrition-related chronic diseases. The score for a given food or beverage is calculated by allocating points for the content per 100g (or per 100mL for

[e] The second edition of the nutrient profile model for the WHO European Region (NPM 2023)

[f] More details on the product profiling methodology see Global Index 2024 methodology. Additional analysis with more product categories and companies will be found in the Global Index 2024 results.

[g] Euromonitor International Limited, Dairy Products and Alternatives Edition, 2022 data, © All rights reserved

beverages) of energy, saturated fat, total sugars, sodium, dietary fiber, protein, and of fruits, vegetables, nuts, and legumes. In 2023, an update to the original Nutri-Score algorithm was released[12]. This most recent algorithm was used for analysis in this report.

Health Star Rating

The Health Star Rating is a front-of-pack interpretive nutrition labeling system designed to assist consumers in making healthier choices. The underlying NPM assesses risk nutrients (overall energy, sodium, total sugars, saturated fat) and positive food components (fruit and vegetable content, protein, fiber, and in some cases, calcium) to score products on the basis of nutritional composition per 100g or 100mL across one of six categories. These scores are then converted to a 'Health Star Rating' from 0.5 to 5 stars in ½ star increments.

Development was led by the Australian government in collaboration with industry, public health and consumer groups, and builds upon the Nutrient Profiling Scoring Criteria (NPSC) previously developed by the Australian and New Zealand governments to regulate health claims. The NPSC itself was based on the UK NPM. The HSR has been implemented in Australia since June 2014 on a voluntary basis. The system has also been adopted in New Zealand. The most recent algorithm was used for analysis in this report.

World Health Organization Euro NPM

The WHO Euro model is an NPM for use and adaptation by Member States of the WHO European Region when developing policies to restrict food marketing to children. This model was selected among all WHO models for information purposes as it was the first WHO model adapted later by five WHO regional offices. The model operates by first requiring foods to be allocated to one of 21 categories. Products are then checked against category-specific compositional thresholds for nutrients and other food components. A product must not exceed on a per 100g or mL basis any of the relevant thresholds for that product category if marketing is to be permitted. Results under this model are simply expressed on a binary basis i.e. 'marketing permitted' or 'marketing not permitted'. Although originally developed in Europe, the model was adapted for other WHO regions. In the absence of standardized regulation in this area, the Euro model was selected as a reasonable basis by which to determine products' suitability to be marketed to children in all countries included in the analysis.

Data analysis

The proportion of products meeting the criteria for each NPM was examined. Results were examined overall, by company type and by Euromonitor International category. As Nutri-Score does not have a binary outcome, a binary outcome was created by restricting the definition of "unhealthy" to those receiving the least healthy 'D' and 'E' scores, in line with previous research[13] that showed grouping scores A-C together as "healthier" and D-E as "less healthy" most closely matched other existing binary nutrient profiling approaches. HSR also does not have a binary outcome and healthiness was defined whenever the product meets $\geq$3.5 stars. The percentage agreement between models was used in the overall interpretation of results. If a product was rated the same under each NPM (e.g., if a product has >3.5 stars for HSR and Nutri-Score A-C), it was considered agreement. The data were analyzed using STATA statistical software version 18.

Results

As shown in Table 10, Nutri-Score had more products considered "healthier" (51%) followed by UK NPM (46%), HSR (36%), and WHO Euro (22%). The overall agreement among the four NPMs was 61%, which means that 61% of products agreed on the healthiness of products according to each NPM requirement. However, when excluding the WHO Euro a higher agreement was observed between HSR, Nutri-Score, and UK NPM (77%).

Most differences were observed between WHO and HSR /UK NPM/Nutri-Score (80%,74%, and 67% of agreement respectively) and between HSR and Nutri-Score (80% agreement). A higher agreement was observed between HSR and UK NPM (87%) and Nutri-Score and UK NPM (86%).

The reasons why models did not show complete agreement is because only the categories of 'confectionery' and 'sweet biscuits, snack bars, and fruit snacks' showed "perfect" agreement (100%) as these categories did not meet the criteria for healthiness of any NPM. Further, 'baked goods' showed high levels of agreement (92%). Whereas 'dairy', 'ready to drink (RTD) tea', 'savory snacks', 'soups' and 'other hot drinks' showed relatively lower agreement (≥50%-80%). The rest of the categories (n= 8) had between 15%-49% of agreement. When excluding the WHO Euro model, there was more agreement between most categories (12 out of 17).

Table 10. *Agreement of the WHO, HSR, Nutri-Score, and UK NPM across products in 17 categories from four companies.*

Food Category		WHO Euro	HSR	Nutri-Score	UK NPM	All 4 NPMs	Excluding WHO Euro
	N	% eligible	% >=3.5	% A-C	% healthy	% agreement	% agreement
Baked Goods	133	2%	0%	7%	7%	92%	93%
Bottled Water	232	49%	67%	100%	93%	49%	67%
Carbonates	424	5%	34%	66%	42%	38%	68%
Concentrates	100	0%	44%	98%	95%	2%	46%
Confectionery	933	0%	0%	0%	0%	100%	100%
Dairy	1,216	46%	74%	77%	78%	50%	76%
Ice Cream	131	1%	8%	56%	21%	44%	53%
Juice	388	4%	22%	67%	58%	30%	49%
Other Hot Drinks	10	0%	20%	0%	10%	80%	80%
Plant-based Dairy	444	22%	56%	81%	81%	28%	65%
RTD Coffee	104	20%	8%	58%	45%	46%	48%
RTD Tea	100	38%	50%	77%	56%	57%	73%
Sauces, Dips, and Condiments	247	26%	59%	82%	64%	38%	77%
Savory Snacks	697	1%	15%	16%	17%	72%	77%
Soup	429	100%	73%	100%	94%	73%	73%
Sports Drinks	77	0%	23%	83%	51%	17%	40%
Sweet Biscuits, Snack Bars and Fruit Snacks	546	0%	0%	0%	0%	100%	100%
Total	**6,211**	**22%**	**36%**	**51%**	**46%**	**61%**	**77%**

As seen in Table 11, when comparing types of portfolios, a high level of agreement was observed among NPMs when applied to an indulgent portfolio (94%) as most products were considered unhealthy. The mixed portfolio showed moderate agreement (61%) between the NPMs. WHO and HSR show lower percentages of healthier products compared to Nutri-Score and UK NPM. Lower agreement among the four NPMs was seen for the dairy portfolio (49%) as HSR, Nutri-Score, and UK NPM had above 75% of products considered as healthier. A relatively lower percentage was observed for WHO (48%) suggesting that dairy products are generally considered healthier by models other than WHO. The beverages portfolio showed the lowest agreement (39%), Nutri-Score rated 71% of the products as healthier, significantly higher than HSR's 31% and WHO's 15%. When excluding the WHO Euro model, all portfolios showed more agreement between the three NPMS, the dairy portfolio showed the largest increase in agreement among the four types of portfolios.

Table 11. *Comparative analysis of WHO, HSR, Nutri-Score, and UK NPM across companies' portfolios.*

Type of company's portfolios	N	WHO Euro % eligible	HSR % >=3.5	Nutri-Score % A-C	UK % healthy	All 4 NPMs	Excluding WHO Euro
						% agreement	% agreement
Mixed	1.431	35%	43%	58%	53%	61%	74%
Indulgent	1.757	0%	3%	5%	5%	94%	97%
Dairy	1.169	48%	75%	78%	80%	49%	76%
Beverages	1.163	15%	31%	71%	55%	39%	58%

1 consists of baked goods, concentrates, confectionery, dairy, other hot drinks, savory snacks, sweet biscuits, snack bars and fruit snacks
2 consists of juice, sauces, dips and condiments, savory snacks, soup, sweet biscuits, snack bars and fruit snacks
3 consists of dairy products
4 consists of bottled water, carbonates, concentrates, dairy, juice, plant-based dairy, RTD coffee, RTD tea, sports drinks

Results from the comparative analysis across categories like 'Confectionery' and 'Sweet Biscuits, Snack Bars, and Fruit Snacks' showed complete agreement among all NPMs, indicating unanimous classification as not healthier. Nutri-Score and UK NPM generally classified a higher percentage of products as healthier compared to WHO and HSR across many categories, particularly notable in 'Bottled Water,' 'Dairy,' and 'Sauces, Dips, and Condiments.' Categories like ‘Ice Cream, ‘Juice, and ‘Sports Drinks’ showed low agreement among the four NPMs, indicating significant differences in how these NPMs assess healthiness. The mixed, dairy, and beverages portfolios showed more variability than the “indulgent” portfolios.

These observations emphasize the importance of considering multiple NPMs for a comprehensive assessment of product healthiness, as reliance on a single model may lead to varying conclusions.

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Annex 1: Participant list

All participants were asked for their consent to participate in this research prior to Delphi participation. Additionally, the participants representing the following organizations consented to the following statement during the Delphi process: "I agree to include the name of my company/organization in the participation list of publications that result from this study to acknowledge my contribution" (n=85). These participants completed one or multiple of the three Delphi Rounds. An additional 12 participants did not consent to being listed in this report.

Industry	Investor	Academia	NGOs/Other Organizations
Ajinomoto Co. Inc.	Achmea IM	Campden BRI	Office for Health Improvement and Disparities (OHID), Department of Health and Social Care (DHSC)
Arla Foods	BNP Paribas Asset Management	Centre for Food Policy, City, University of London	Accenture
Asda	CCLA Investment Management	City University of New York	Ali Morpeth Nutrition and University of Leeds
Cardano	Greenbank Investments	Duke University	British Nutrition Foundation
Conagra Brands	Legal & General Investment Management Ltd	HAS University of Applied Sciences	Choices International Foundation
Co-op	Nomura Asset Management Co., Ltd.	International University of Health and Welfare	Food and Agriculture Organization of the United Nations (FAO)
Danone	Pictet Group	National Institutes of Biomedical Innovation, Health and Nutrition	GAIN
Eat Well Global		Queen Mary University of London	Gates Foundation
Food Industry Asia (FIA)		The George Institute for Global Health	Nesta
Grupo Bimbo		Tufts	The Obesity Health Alliance
Guiding Stars Licensing Company, LLC/ADUSA		UConn Rudd Center	World Benchmarking Alliance
IFBA		Université Laval	World Economic Forum
ITC Limited		University of Leeds	
Jamie Oliver Group		University of Oxford	
KDP		University of Washington	
Kellogg		Wageningen University	
Kerry			
Kraft Heinz			
Mars, Incorporated			
McCain Foods Limited			
Meiji Co., Ltd.			
Mondelez International, Inc.			
MyEatPal			
Nestlé SA			
Nissin Foods Holdings Co., ltd.			
Nomad Foods			
Paulig			
PepsiCo			
Quorn Foods			
Royal Friesland Campina			

Sainsbury's			
Samworth Brothers			
Soremartec			
Tesco			
Unilever PLC			
Whitbread			
Wm Morrisons Supermarkets Ltd			

Annex 2: Investor, Industry and CSO/Academic statements

ATNI NPM alignment project – Investor statement

As responsible investors, and consistent with our fiduciary duty to our beneficiaries, we recognize the mutual benefit to investors, businesses and society of taking action on nutrition. The triple burden of malnutrition places a serious strain on our societies and economies: poor diets drive one in five deaths globally; reduce productivity; and increase health expenditure dragging down GDP between to 3-11% in several countries. We recognize that a) the global Food & Beverage sector and our investments within have a critical role to play in addressing this crisis and b) for investors and other stakeholders current corporate reporting is not sufficient to assess if progress is being made.

As members of the ATNI's Investors in Nutrition and Health (AINH), we are one of 87 signatories to the Investor Expectations on Nutrition, Diets and Health and have committed to using these Investor Expectations to engage directly with Food & Beverage manufacturers and retailers to improve outcomes for nutrition and public health. We use the insights we generate from our engagement to inform our investment research and, potentially, our investment decisions.

In line with the Investor Expectations' actions 2 and 4, which respectively ask companies to inter alia, articulate a definition of healthy products using an independent nutrient profiling model (NPM) such as the Health Star Rating system or equivalent; and publicly disclose quantitative data on the (increasing) revenues from healthy products, we welcome the results of ATNI's Delphi project. The Project results confirm that the appropriate models for companies to use are Health Star Rating (HSR), Nutri-Score, and/or the UK NPM.

We call on all food and beverage manufacturers and retailers to benchmark their product portfolios against at least one of the three NPMs and to utilize the proposed reporting guidelines in order for us investors to better gauge and compare the healthiness of their products and sales.

In addition, we ask that companies' annual reporting include sales-weighted average NPM results for the entire portfolio, by product category, total sales revenue from packaged products eligible to be assessed by the selected NPM(s), and the percentage of sales/revenue from 'healthier' vs. 'unhealthier' products based on the application of the chosen NPM(s).

ATNI NPM alignment project – Industry [company/association] statement

The triple burden of malnutrition places a serious strain on our society and economy. Poor diets drive one in five deaths globally; reduce productivity; and increase health expenditure dragging down GDP between to 3-11% in several countries.

As food and beverage company/association [company name/ association name] we are committed to producing and delivering products that fit in a healthy diet and that help a food system transformation that supports healthy people on a healthy planet.

Following the results of an ATNI-led multistakeholder alignment initiative in 2024 we now commit to show the relative healthiness of our portfolio globally and/or in specific markets and to provide a benchmark against specific company standards by:

- Benchmark the relative healthiness of our portfolio globally and/or in specific markets against at least on of three nutrient profile models (NPMs) identified as most appropriate for company reporting; **the Health Star Rating (HSR), Nutri-Score, and/or the UK NPM**, making use of the proposed reporting guidelines from the alignment initiative;
- Report annually on sales weighted average NPM results for their entire portfolio, by product category, total sales revenue from packaged products eligible to be assessed by the selected NPM(s), and the percentage of sales/revenue from and the percentage of sales/revenue from 'healthier' vs 'standard/less healthy' products based on the application of the chosen NPM(s).

Regularly reporting on the healthiness of our portfolio will allow investors and governments to compare the healthiness of our product portfolio, view health-focused sales data, and monitor progress in improving the healthiness of our portfolio over time.

ATNI NPM alignment project – CSO/Academia statement

The triple burden of malnutrition places a serious strain on our society and economy. Poor diets drive one in five deaths globally; reduce productivity; and increase health expenditure dragging down GDP between to 3-11% in several countries.

[Organization name] recognizes that the global food & beverage sector has a crucial role to play in shaping healthy diets and are committed to driving the food industry to produce and provide healthier products to consumers. So that we can better gauge and compare the healthiness of companies' products and sales, following the results of an ATNI-led multistakeholder alignment initiative in 2024, we ask companies to use the Heath Star Rating (HSR), Nutri-Score, and/or the UK NPM to:

- Articulate a definition of 'healthy' and publicly disclose revenues from healthy products;
- Benchmark the healthiness of their portfolio globally and/or in specific markets against, making use of the proposed reporting guidelines from the alignment initiative;
- Report annually on sales weighted average results for their entire portfolio, by product category, total sales revenue from packaged products eligible to be assessed by the selected NPM(s), and the percentage of sales/revenue from 'healthier' vs 'less healthy' products.

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